

No.

200400179



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Syngenta Seeds, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR ANY OTHER VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE SAID STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED, (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (34 STAT.

1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Coker 9312'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of June, in the year two thousand and four.

Attest:



RLM

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Freeman

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Syngenta Seeds, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME B961416		3. VARIETY NAME COKER 9312	
4. ADDRESS <i>(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</i> P.O. Box 959 Minneapolis, MN 55440 Attn: John Thorne		5. TELEPHONE <i>(include area code)</i> 763-593-7333		<div style="border: 1px solid black; padding: 5px;"> <p align="center">FOR OFFICIAL USE ONLY</p> <p>PVPO NUMBER 200400179</p> <p>FILING DATE April 15, 2004</p> </div>	
		6. FAX <i>(include area code)</i> 763-542-0194			
7. IF THE OWNER NAME IS NOT A "PERSON", GIVE FORM OF ORGANIZATION <i>(corporation, partnership, association, etc.)</i> Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		9. DATE OF INCORPORATION 1976	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. <i>(First person listed will receive all papers)</i> John Thorne Syngenta Seeds, Inc. B.O. Box 949 Washington, IA 52353-0949					
11. TELEPHONE <i>(include area code)</i> 319-653-2181		12. FAX <i>(include area code)</i> 319-653-4609		13. E-MAIL johnc.thorne@syngenta.com	
14. CROP KIND <i>(Common Name)</i> Common Wheat		16. FAMILY NAME <i>(Botanical)</i> Poaceae		18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED <i>(Follow instructions on reverse)</i> a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety <i>(Optional)</i> e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample <i>(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)</i> g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" <i>(Mail to the Plant Variety Protection Office)</i>					
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES <i>(If "yes", answer items 21 and 22 below)</i> <input type="checkbox"/> NO <i>(If "no", go to item 23)</i>					
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED					
22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED <i>(If additional explanation is necessary, please use the space indicated on the reverse.)</i>					
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Fall 2003, U.S.A. Registered Seed Sales IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. <i>(Please use space indicated on reverse.)</i>					
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. <i>(Please use space indicated on reverse.)</i>					

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER 		SIGNATURE OF OWNER 	
NAME <i>(Please print or type)</i> John Thorne		NAME <i>(Please print or type)</i> John Thorne	
CAPACITY OR TITLE Devel. Dir., Self-pollinated Crops	DATE 26 Mar 2004	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

Coker 9312**Exhibit A: Origin and Breeding History**

Coker 9312 is a soft red winter wheat developed from a cross made by Syngenta Seeds, Inc. in 1988 with a pedigree of PS840061/Saluda//COKER 9803. PS840061 is an unreleased line developed by Rohm and Haas Seeds. The pedigree is Benhur/Blueboy II. Benhur is a variety released by Indiana in 1966. Blueboy II is a variety released by North Carolina in 1971. Saluda is a variety released by Virginia in 1983. COKER 9803 is a variety released by Syngenta Seeds, Inc. in 1991. A modified bulk breeding system was used to develop the line. An F3 derived head row was advanced to preliminary yield testing and designated B920179. Yield testing continued and in 1996 reselection occurred in the nested purity increase and the plot selected was designated B961416. Yield testing and increase of B961416 has been occurring until release in 2003 as COKER 9312. Early generation selection and advancement was based on agronomic and disease characteristics, later uniformity and yield were the criteria used for advancement.

Table 1: Development of COKER 9312

Season	Generation	Activity
1988		Cross
1988-1989	F1	Bulk seed grown in the greenhouse.
1989-1990	F2	Bulk population grown in the field, selected 100 heads for head row nursery, advancement based on leaf rust resistance and agronomic traits.
1990-1991	F3	Head row nursery, selection based on maturity, leaf rust resistance and other agronomic traits.
1991-1992	F4	Observation nursery #696, selection based on height, maturity and disease resistance.
1992-1993	F5	Preliminary yield testing, assigned line number BL920179. Advancement based on yield, height and disease resistance.
1993-1994	F6	Yield testing in advanced company trials, small increase at Bay, Arkansas. Advancement based on yield, agronomic traits and leaf rust resistance.
1994-1995	F7	Yield testing in elite company trials, small increase with nested head rows for purity; advancement based on yield, leaf rust resistance and maturity.
1995-1996	F8	Yield testing in elite company trials, small increase with nested plots, variability in plots and reselection occurred, advancement based on yield, uniformity, maturity and disease resistance.
1996-1997	F9	Preliminary yield testing, assigned line number B961416. Advancement based on yield, height and disease resistance.
1997-1998	F10	Yield testing in advanced company trials, small increase at Bay, Arkansas. Advancement based on yield, agronomic traits and leaf rust resistance.
1998-1999	F11	Yield testing in elite company trials, small increase with nested head rows for purity; advancement based on yield, leaf rust resistance and maturity.
1999-2000	F12	Yield testing in elite company trials, small increase with nested plots for purity, advancement based on yield, uniformity, maturity and disease resistance.

COKER 9312**Exhibit A: Origin and Breeding History of the Variety (cont.)**

2000-2001	F13	Yield testing in elite company trials, large pre-breeder increase and tested in Uniform Eastern Soft Red Winter Wheat Nursery. Advancement based on yield, agronomic traits and disease resistance.
2001-2002	F14	Continued testing in company trials and in the Uniform Southern Soft Red Winter Wheat Nursery with Breeder/Foundation seed increase. Advancement based on yield, agronomic data and disease resistance.
2002-2003	F15	Continued testing in company trials and limited state trial testing. Variety released as COKER 9312 and Registered seed sold to TGN Certified Seed Growers in the Fall 2003.

COKER 9312 is an F3 derived head row with yield testing initiated as an F9 in 1996-1997. The variety has been tested and observed for 7 years with 6 years of seed increase. COKER 9312 is stable and uniform. Breeder seed was developed by bulking seed from head row generated increase strips that had been maintained separately for three (F11, F12, and F13) generations of increase for purity, uniformity and stability comparisons. Variants may include one or more of the following in any combination; taller, awned, bronze or later type, which maybe expressed up to 1%.

COKER 9312**Exhibit B: Statement of Distinctness**

COKER 9312 most closely resembles COKER 9803; however COKER 9312 has red colored coleoptiles and COKER 9803 has green colored coleoptiles. COKER 9312 is resistant to biotypes E and O of Hessian fly, where COKER 9803 is susceptible.

Table 2: Distinctness

HESSIAN FLY BIOTYPES

		2000	2001	2002	2002
	COLEOPTILE	E	O	E	O
COKER 9312	RED	17/2	20/0	16/0	12/2
COKER 9803	GREEN	0/11	1/9	0/18	0/14

= Resistant/Susceptible seedlings.

Screening done by USDA-ARS, Crop Production and Pest Control Research Unit, West Lafayette, IN.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT C
(Wheat)**

**OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)**

NAME OF APPLICANT(S) Syngenta Seeds, Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) P.O. Box 959 Minneapolis, MN 55440 Attn: John Thorne	PVPO NUMBER 200400179 VARIETY NAME COKER 9312 TEMPORARY OR EXPERIMENTAL DESIGNATION B961416

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Munsell Color Chart

Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

- 1=Common
 2=Durum
 3=Club
 4=Other (SPECIFY) : _____

2. VERNALIZATION:

- 1=Spring
 2=Winter
 3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

- 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

- 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR (boot stage):

- 1 = Yellow-Green
 2 = Green
 3 = Blue-Green

Munsell Color Chart 7.5GY 4/4 - 4/6

6. FLAG LEAF (boot stage):

- 1 = Erect
 2 = Recurved

 1 = Not Twisted
 2 = Twisted

 1 = Wax Absent
 2 = Wax Present

7. EAR EMERGENCE:

- Number of Days (Average)
- Number of Days Earlier Than Pioneer Brand 25R26 *
- Same as _____ *
- Number of Days Later Than _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

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8. ANTHOR COLOR:

☐ 1 = Yellow
☐ 2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns):

☐ 0 ☐ 8 ☐ 4 cm (Average)

☐ ☐ cm Taller Than _____ *

Same as COKER 9803 _____ *

☐ ☐ cm Shorter Than _____ *

10. STEM:

A. ANTHOCYANIN

☐ 1 = Absent
☐ 2 = Present

B. WAXY BLOOM

☐ 2 = Absent
☐ 2 = Present

C. HAIRINESS

(last internode of rachis)

☐ 2 = Absent
☐ 2 = Present

D. INTERNODE

☐ 1 = Hollow 2 = Semi-solid 3 = Solid

☐ 4 Number of Nodes

E. PEDUNCLE

☐ 1 = Erect 2 = Recurved 3 = Semi-erect

☐ 2 ☐ 5 cm Length

F. AURICLE

☐ 1 Anthocyanin 1 = Absent 2 = Present

☐ 2 Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY

☐ 2 = Lax
☐ 2 = Middense (Laxidense)
☐ 3 = Dense

B. SHAPE

☐ 1 = Tapering
☐ 2 = Strap
☐ 3 = Clavate
☐ 4 = Other (SPECIFY): _____

C. CURVATURE

☐ 2 = Erect
☐ 2 = Inclined
☐ 3 = Recurved

D. AWNEDNESS

☐ 2 = Awnless
☐ 2 = Apically Awnletted
☐ 3 = Awnletted
☐ 4 = Awned

12. GLUMES (at Maturity):

A. COLOR

- ☐ 2 1 = White
2 = Tan
3 = Other (SPECIFY): _____

Munsell Color Chart 2.5 Y 7/6

B. SHOULDER

- ☐ 1 1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (SPECIFY): _____

C. SHOULDER WIDTH

- ☐ 2 1 = Narrow
2 = Medium
3 = Wide

D. BEAK

- ☐ 1 1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

- ☐ 2 1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

- ☐ 2 1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

G. WIDTH

- ☐ 2 1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED

A. SHAPE

- ☐ 1 1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

- ☐ 1 1 = Rounded
2 = Angular

C. BRUSH

- ☐ 3 1 = Short 1 = Not Collared
2 = Medium 2 = Collared
3 = Long

D. CREASE

- ☐ 2 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

- ☐ 2 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

- ☐ 3 1 = White
2 = Amber
3 = Red
4 = Other (SPECIFY): _____
MCC 7.5 YR 7/6

F. TEXTURE

- ☐ 2 1 = Hard
2 = Soft
3 = Other (SPECIFY): _____

G. PHENOL REACTION (see instructions):

- ☐ 3 1 = Ivory 4 = Dark Brown
2 = Fawn 5 = Black
3 = Light Brown

H. SEED WEIGHT

- ☐ 3 ☐ 2 g/1000 seed (Whole number only)

I. GERM SIZE

- ☐ 2 1 = Small
2 = Midsize
3 = Large

14. Disease : (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input checked="" type="checkbox"/> 3 Stem Rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) TTRS, RTQQ, QTHJ, RTHJ, TPMK	<input checked="" type="checkbox"/> 3 Leaf Rust (<i>Puccinia recondita</i> f. sp. <i>tritici</i>) Field races in Midsouth and east coast areas and races KBBG, BBBD, CBMT, LBBT, MCJJ, KFBJ
<input checked="" type="checkbox"/> 1 Stripe Rust (<i>Puccinia striiformis</i>) Field races Midsouth in 2002 & 2003	<input type="checkbox"/> 0 Loose Smut (<i>Ustilago tritici</i>) TLGK AND TNRJ
<input type="checkbox"/> 0 Tan Spot (<i>Pyrenophora tritici-repentis</i>)	<input type="checkbox"/> 0 Flag Smut (<i>Urocystis agropyri</i>)
<input type="checkbox"/> 0 Halo Spot (<i>Selenophoma donacis</i>)	<input type="checkbox"/> 0 Common Bunt (<i>Tilletia tritici</i> or <i>T. laevis</i>)
<input type="checkbox"/> 0 <i>Septoria nodorum</i> (Glume Blotch)	<input type="checkbox"/> 0 Dwarf Bunt (<i>Tilletia controversa</i>)
<input type="checkbox"/> 0 <i>Septoria avenae</i> (Speckled Leaf Disease)	<input type="checkbox"/> 0 Karnal Bunt (<i>Tilletia indica</i>)
<input checked="" type="checkbox"/> 3 <i>Septoria tritici</i> (Speckled Leaf Blotch) Field races in the Midsouth in 20002 and 2003.	<input checked="" type="checkbox"/> 1 Powdery Mildew (<i>Erysiphe graminis</i> f. sp. <i>tritici</i>) Field races 2002 and 2003 in east coast area.
<input checked="" type="checkbox"/> 1 Scab (<i>Fusarium</i> spp.) Field	<input type="checkbox"/> 0 "Snow Molds"
<input type="checkbox"/> 0 "Black Point" (Kernel Smudge)	<input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input checked="" type="checkbox"/> 2 Soilborne Mosaic Virus (SBMV) Field races in Missouri and Tennessee	<input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input checked="" type="checkbox"/> 3 Wheat Yellow (Spindle Streak) Mosaic Virus Field in Arkansas	<input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> Other (SPECIFY) _____	<input type="checkbox"/> Other (SPECIFY) _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input checked="" type="checkbox"/> 2 Hessian Fly (<i>Mayetiola destructor</i>) Biotypes B, E and O.	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/> Other (SPECIFY) _____
<input type="checkbox"/> 0 Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/> Other (SPECIFY) _____

15. INSECT: *Continued* (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

☐

Greenbug (*Schizaphis graminum*)

☐

Other (SPECIFY) _____

☐

Aphids

☐

Other (SPECIFY) _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

Exhibit D: Additional Description of COKER 9312**Table 3: Yield Data Bu/Ac**

	ALL LOCATIONS		NORTHERN		CORN BELT		NORTH MIDSOUTH		EASTERN	
	1 YR	2 YR	1 YR	2 YR	1 YR	2 YR	1 YR	2 YR	1 YR	2 YR
COKER 9312	65	63	68	66	76	71	77	70	63	61
COKER 9803	61	58	62	61	67	62	68	63	62	59
COKER 9663	68	60	71	64	80	68	92	73	62	58
COKER 9152	70	63	71	64	86	71	89	74	61	57
COKER 9184	56	56	54	57	54	53	44	50	60	63
26R61	61	58	55	54	62	52	65	52	52	62
AGS 2000	66	61	66	61	73	61	79	62	61	62
Patton	61	59	64	65	73	65	72	64	59	64
25R26	62	61	64	63	73	67	76	64	56	60
KASKASKIA	63	60	62	62	72	65	80	69	53	56
Test Mean	64	61	64	63	72	64	76	64	59	62
Trials w/ Data	15	34	9	20	5	11	2	5	5	12
LSD (0.05)	5.7	3.9	6.9	5.2	9.1	6.5	12.6	11.3	9.4	6.8
CV %	12.5	13.6	11.7	13.4	10.1	12.2	8.2	14.1	12.8	13.7
1 YR = 2003	2 YR = 2002 & 2003									

**2003 SYNGENTA SEEDS NAFTA WHEAT
LOCATIONS BY AREA**

ELITE	NAME	ALL	NORTH	CORN BELT	N. MIDSOUTH	EAST
2002-2003	US BERNIE, MO 1110	BMO	BMO	BMO		
	US UNION CITY, TN 1120	UCTN	UCTN	UCTN		
	US HOPKINSVILLE, KY 1135	HKY	HKY	HKY		
	US COLUMBIA, MO 1140	CMO	CMO	CMO		
	US ST. JACOB, IL 1150	SJIL	SJIL	SJIL		
	US WAUSEON, OH 1170	WOH	WOH	WOH		
	US BAY, AR 2210	BAR			BAR	
	US DEWITT, AR 2220	DAR			DAR	
	US WHITEHALL, AR 2230	WAR			WAR	
	US MACON, MS 3310	MMS				
	US LEWISVILLE, AR 3330	LAR				
	US GREENVILLE, MS 3340	GMS				
	US PLYMOUTH, NC 4500	PNC	PNC			PNC
	US WINTERVILLE, NC 4510	WNC	WNC			WNC
	US KINSTON, NC 4520	KNC	KNC			KNC
	US WARSAW, VA 4530	WVA	WVA			WVA
	US PLAINS, GA 4600	PGA				PGA
	US HARTSVILLE, SC 4650	HSC				HSC
	US MOUNT JOY, PA 4710	MJPA	MJPA			MJPA
	US SMYRNA, DELAWARE 4750	SDE	SDE			SDE

Exhibit D: Additional Description of COKER 9312 cont.**Table 4: Agronomic Characteristics**

	Test Weight Lb/Bu		Heading Date from 4/1 at Bay, AR			Height Inches	Lodging 1 - 9		Juvenile Growth Habit 1 - 5		
	2001	2002	2001	2002	2003	2003	2002	2003	2000 BAR	2001 BAR	2003 BAR
COKER 9312	59.7	58.2	17	20	18	32	3	2	3	4	3
COKER 9803	59.9	58.5	19	19	18	32	3	2	4	3	3
COKER 9663	59.2	57.2	21	18	21	38	4	3	3	2	3
COKER 9152	57.9	56.3	19	19	18	39	4	2	3	3	3
COKER 9184	60.7	58.4	23	22	23	32	2	2	3	3	3
26R61	60.6	56.9	20	19	17	36	3	1	-	3	4
AGS 2000	59.3	56.6	20	17	16	35	3	3	-	4	4
PATTON	55.8	55.8	19	21	19	34	3	2	2	1	2
25R26	57.0	56.4	21	24	22	32	2	2	2	1	1
KASKASKIA	59.6	59.0	23	24	25	37	2	2	-	3	1
Test Mean	58.8	57.2	20	21	21	34	3	2	3	3	3
Trials w/ Data	9	16	1	1	1	11	14	10	1	1	1
LSD (0.05)	1.4	1.5	2	1	2	1	0.7	0.7	0.7	1	0.6
CV %	2.3	3.9	1	1	1	4	34.1	42.6	34.7	18	14.5
Reps			3	3	3				3	3	3

Test Weight (lb/bu): Average test weight across 9 locations in 2001 and 16 location in 2002.

Heading Date: Average date after April 1 at Bay, AR 2001, 2002, and 2003.

Height: Averaged over 11 locations in 2003.

Lodging 1 - 9 1 = none 2002, 14 locations. 2003, 10 locations.

Growth Habit 1 - 5 1 = Prostrate 3 = Semi-Erect 5 = Erect Averaged over 3 reps from Bay, AR 2000, 2001 & 2003.

Exhibit D: Additional Description of COKER 9312 cont.**Table 5: Leaf Rust**

	2002								2003	
	BAR	MMS	LAR	PNC	WNC	PGA	DSC	BRLA (%)	BRLA	PGA
COKER 9312	1	2	2	4	4	6	3	0	1	3
COKER 9803	2	2	3	4	5	6	2	0	1	2
COKER 9663	3	5	8	6	3	8	4	15	1	7
COKER 9152	1	1	2	2	2	1	1	0	1	1
COKER 9184	2	1	2	2	2	2	2	0	1	2
26R61	1	2	2	2	2	4	2	0	1	4
AGS 2000	1	2	2	3	2	2	1	0	1	1
PATTON	2	1	5	4	2	4	1	0	1	6
25R26	2	3	7	2	1	5	2	0	1	2
KASKASKIA	3	3	5	2	2	7	1	-	1	2
Test Mean	2	3	4	4	3	5	2	-	1	3
LSD (0.05)	1.1	2.1	1.8	1.0	1.2	2.7	1.9	-		
CV %	32.8	36.1	26.0	17.8	26.7	29.3	42.9	-		
Reps w/ Data	3	2	3	3	3	2	2	1	1	1

Scale 1 – 9 1 = Resistant

BRLA (%): Baton Rouge, LA is percent leaf area covered.

HKY: Henderson, KY; PNC: Plymouth, NC; PGA: Plains, GA; BAR: Bay, AR;

MMS: Macon, MS; LAR: Lewisville, AR; WNC: Winterville, NC; DSC: Dillon, SC

Exhibit D: Additional Description of COKER 9312 cont.**Table 6: Powdery Mildew**

	2003				2002					
	DSC	KNC	WNC	MJPA	MJPA	WVA	WNC	KNC	DSC	PGA
COKER 9312	3	3	7	1	6	6	6	5	3	4
COKER 9803	3	4	2	1	4	4	5	5	4	2
COKER 9663	3	5	5	2	4	7	6	6	5	3
COKER 9152	5	5	5	2	3	6	5	5	5	1
COKER 9184	2	4	2	1	3	2	4	4	4	1
26R61	1	2	1	2	3	3	3	5	2	1
AGS 2000	1	2	1	2	3	2	2	4	1	1
Patton	1	4	3	4	3	5	3	5	2	1
25R26	2	4	3	2	4	7	4	5	2	1
KASKASKIA	3	6	4	4	4	6	4	5	3	1
Test Mean	2	4	3	2	3	4	3	4	3	1
LSD (0.05)	1.4	1.6	1.3	1.4	1.3	1.2	1.5	0.8	1.0	-
CV %	31.3	22.2	28.6	48.2	23.8	21.5	22.6	8.8	21.8	-
Reps w/ Data	2	2	3	3	3	3	2	2	3	1

Scale 1 – 9 1 = Resistant

KNC: Kinston, NC; PGA: Plains, GA; WNC: Winterville, NC; MJPA: Mount Joy, PA; WVA: Warsaw, VA; DSC: Dillon, SC

Exhibit D: Additional Description of COKER 9312 cont.**Table 7: Other Diseases**

	Septoria Triticii		Stripe Rust			Wheat Spindle Streak Virus		Soil Borne Mosaic Virus	
	2002 HKY	2003 CMO	2000 LAR	2002 LAR	2003 ALL	1999 BAR	2001 BAR	2002 BMO	2002 UCTN
COKER 9312	3	5	4	9	7	4	3	2	2
COKER 9803	4	5	4	8	6	5	5	3	2
COKER 9663	3	3	4	5	5	5	4	2	4
COKER 9152	4	5	3	4	4	2	3	2	4
COKER 9184	6	5	3	7	5	5	5	3	1
26R61	4	4	-	2	2	-	2	1	3
AGS 2000	4	4	-	7	5	-	6	2	6
Patton	4	4	7	7	6	-	3	1	1
25R26	5	6	6	7	5	-	4	1	1
KASKASKIA	3	6	-	4	3	-	4	2	1
Test Mean	4	5	4	5	4.3	4	4	2	2
LSD (0.05)	1.1	1.3	1.1	1.7	1.3	0.9	1.3	1.5	1.5
CV %	16.3	16.1	16.4	18.8	25.5	13.0	18.0	44.3	45.4
Reps w/ Data	3	3	3	3	6 TRIALS	3	3	3	3
Scale 1 – 9 1 = Resistant									

HKY: Henderson, KY; CMO: Columbia, MO; LAR: Lewisville, AR; BAR: Bay, AR; BMO: Bernie, MO;
UCTN: Union City, TN; ALL: All locations in 2003 with Stripe Rust (CMO, DAR, LAR, GMS, PGA BRLA)

Table 8: Hessian Fly

	2000			2001		2002		
Biotypes	E	L	O	L	O	E	L	O
COKER 9312	17/2	0/10	9/9	0/13	20/0	16/0	0/20	12/2
COKER 9803	0/11	0/14	-	0/13	1/9	0/13	0/18	0/14
COKER 9663	2/10	0/12	0/18	0/11	0/12	3/12	0/12	0/16
COKER 9152	5/12	0/14	0/18	0/13	10/3	0/13	0/16	0/14
COKER 9184	0/16	0/14	18/0	0/16	14/5	0/12	0/14	2/10

= Resistant/Susceptible seedlings.

Screening done by USDA-ARS, Crop Production and Pest Control Research Unit, West Lafayette, IN.

Exhibit D: Additional Description of COKER 9312 cont.**Table 9: Milling and Baking Quality**

	Milling	Baking	Comb.	Micro Test Weight	Softness Equival.	Flour Yield	Flour Protein	Micro AWRC	Cookie Dia.	Top Grade
2001 Crop										
Standard CK 9543	100	100	100	61.9	57.5	72.2	9.37	55.5	17.86	4
COKER 9312	98.2	109.0	98.2	61.3	59.5	71.5	9.33	54.7	18.60	6
Rated Acceptable										
2000 Crop										
Standard Patton	100	100	100	59.7	55.2	71.9	10.08	54.5	17.78	3
COKER 9312	94.4	105.7	94.4	59.9	55.8	70.4	10.99	53.4	17.90	3
Rated Acceptable										
1999 Crop										
Standard CK 9543	100	100	100	61.4	58.2	72.0	8.39	53.6	18.27	-
COKER 9312	100.9	104.0	100.9	60.8	60.9	71.9	8.72	54.3	18.43	-
Rated Acceptable										

Quality data from USDA Soft Wheat Quality Lab, Wooster, OH.
 2001, 2000, and 1999 ratings are from Syngenta Seeds, Inc. elite trials.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Syngenta Seeds, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER B961416	3. VARIETY NAME COKER 9312
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) P.O. Box 959 Minneapolis, MN 55440 Attn: John Thorne	5. TELEPHONE (include area code) 763-593-7333	6. FAX (include area code) 763-542-0194
7. PVPO NUMBER 200400179		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country ☒ YES ☐ NO

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?
☐ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?
☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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